# PENGUKURAN DAN ANALISIS NILAI OVERALL EQUIPMENT EFFECTIVENESS (OEE) UNTUK PENINGKATAN PRODUKTIFITAS KINERJA SISTEM MANUFAKTUR

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## ABSTRAK

Overall Equipment Effectiveness (OEE) adalah salah satu indikator pengukur performa mesin yang banyak diterapkan para pelaku industri di dunia. OEE membantu identifikasi letak permasalahan sesungguhnya sehingga perbaikan yang dilakukan berfokus pada sektor yang tepat. Pencapaian produksi mesin SDS 700 & 900 di PT. Asia Pacific Fibers berturut turut adalah 83% dan 94,5% sehingga mempengaruhi nilai quality, cost dan delivery. Penelitian ini bertujuan untuk mengidentifikasi permasalahan kinerja kedua mesin, mengusulkan prioritas perbaikan dan merancang tool software pengukur OEE. Dalam penelitian ini dilakukan pengukuran OEE, analisis diagram pareto, fishbone, FMEA dan perancangan program dengan Object Oriented (OO). Penelitian ini memberikan hasil yaitu rendahnya quality rate pada OEE yang berkisar antara 35% hingga 75% disebabkan oleh berat medium karena benang putus. Prioritas perbaikan adalah moda kegagalan misthreading yang memiliki RPN tertinggi dengan nilai 30. Hasil rancangan tool software OEE berbasis web sebagai alat ukur OEE diharapkan dapat memonitor performa mesin dan membantu dalam perbaikan yang optimal.

Kata Kunci : OEE, FMEA, Tool software

# MEASUREMENT AND ANALYSIS OF THE OVERALL EQUIPMENT EFFECTIVENESS (OEE) VALUE TO IMPROVE PERFORMANCE PRODUCTIVITY OF MANUFACTURING SYSTEM

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## ABSTRACT

Overall Equipment Effectiveness (OEE) is one of the measuring indicators of machine performance which widely applied by industry actors in the world. OEE helps identify the location of the exact problems therefor the improvement precisely focus in the right aspect. The production amount of machine SDS 700 & 900 in PT. Asia Pacific Fibers were 83% and 94.5% thus it had huge impact to the value of quality , cost and delivery. This study aims to identify the performance problems of both machines, proposes priorities and develops design of OEE tool software. This study was conducted with OEE measurement method, analysis of pareto diagram, fish bone, FMEA and software design with Object Oriented(OO). This study results that the less of quality ratio on the OEE rate ranging from 35% to 75% due to the medium weight because of broken thread. Improvement priority is misthreading failure mode that has the highest RPN value of 30. The web-based OEE software for OEE measurement is expected to monitor the machine performance and help the optimal improvement.

Keyword : OEE, FMEA, Tool software